# University of Massachusetts Lowell

**PSYC.2690.001 Research I: Basics**

**Spring 2017**

<table>
<thead>
<tr>
<th>Instructor:</th>
<th>Kathleen Leonard, Ph.D.</th>
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<tbody>
<tr>
<td>Email:</td>
<td>Email is the best way to contact me <a href="mailto:kathleen_leonard@uml.edu">kathleen_leonard@uml.edu</a></td>
</tr>
<tr>
<td>Phone:</td>
<td>978-272-1385 for emergencies only</td>
</tr>
<tr>
<td>Class time:</td>
<td>Tues. 6:30-9:20 pm in HSS 160</td>
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<tr>
<td>Office Hours:</td>
<td>Tues. 6-6:30 pm in classroom</td>
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<tr>
<td>Prerequisite:</td>
<td>PSYC.1010 General Psychology</td>
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## Course Overview
Welcome to Research I, your introduction to the science of psychology! This course requires a new way of thinking for most students, focusing on the importance of being a critical consumer of information. Understanding the methods that lead to scientific findings and how those findings may be interpreted is an essential skill that will serve you well in a career in psychology or any field. As stated in the undergraduate course catalog, Research I is "An introductory course concentrating on the basics of scientific research in Psychology. Students will learn: how to acquire information from libraries and the Internet; methods for collecting data, such as surveys, case studies, unobtrusive measures and observational procedures, in experimental, quasi-experimental and correlational designs; how to operationalize variables to create reliable and valid measures; to identify types of data and how to describe and graph data; the basics of hypothesis testing and statistical significance; and how research is communicated in research reports using APA style. Attention will also be given to ethical issues in research with human and nonhuman subjects."

## Teaching Philosophy
My teaching style is very explicit and conceptual. I tend to talk through ideas, providing examples and visual illustrations, until I feel confident that students grasp the concepts presented. I understand the danger of lulling students to sleep through excessive lecturing. Therefore, I expect students to engage and speak up. I am quite comfortable waiting through silences until students reciprocate. When students participate, the course is more enjoyable for everyone and retention of material is improved. My aim is to provide course material in as clear and interesting a way as possible so that students then take ownership of that material, rather than being passive consumers of information. I maintain high expectations that college students will be active and diligent in their own learning but I also work hard to provide varied supports (handouts, individual meetings, etc.) that will help different student learning styles.
Course Learning Outcomes

- Apply the scientific method to the formulation and refinement of research questions
- Distinguish between primary and secondary sources
- Identify empirical research articles and be able to search efficiently using standard databases such as PsycInfo
- Evaluate the credibility of information available on electronic media
- Apply principles of psychometrics for the assessment of validity and reliability to the selection and construction of research materials and measures
- Distinguish among experimental, correlational, and descriptive designs and apply them appropriately to research questions
- Identify the strengths and limitations of major types of assessment (i.e., surveys, interviews, observation, physiology) and apply them to relevant research designs
- Use operational definitions to describe psychological constructs and procedures
- Identify the strengths and limitations of between- and within-subjects designs and apply those designs to relevant research questions
- Use the appropriate descriptive statistics to describe the central tendency and variability of a body of data
- Describe a research design using APA style to organize and cite information
- Use these principles to critique the design of studies and identify whether conclusions are supported by the methods employed
- Apply these principles to an original research design based on primary source empirical journal articles and employing an experimental manipulation that is minimal risk and well controlled

Student Work and Evaluation

Your mastery of the course objectives will be developed and evaluated through the following components (totaling 100 pts.). Each component is described in detail below.

1. Class attendance and participation 10pts.
2. Attendance/viewing of two research colloquia 10pts.
3. Homework assignments 20pts.
4. Three in-class exams (10 each) 30pts.
5. Research proposal (25) and presentation (5) 30pts. 100 pts.

1. Class attendance and participation
Students are expected to attend class and participate in discussion. Attendance will be taken. Students are allowed two unexcused absences throughout the semester. After two absences, points will be deducted from the attendance grade. If a student misses class, he or she is responsible for learning about the material covered during that class from a classmate and from the materials posted on Blackboard. Please do not email me asking what you missed when absent but feel free to come speak with me if you do not understand some of the material you missed.
Students should not use phones, text, surf the internet, or do other work during class as it is disrespectful and distracting to the professor and other students. Students who engage in these activities will not receive attendance credit for that particular class. We will have a break in the middle of class during which time you can check your phone. Laptops are not permitted without permission.

2. Attendance/viewing of two research colloquia
All Research I students are required to attend or watch two research colloquia hosted by the psychology department. Colloquia are a great opportunity to learn about current research being conducted by UML students and faculty. A schedule of the colloquia for the semester will be circulated in class. Preferably students will attend these presentations in person but if that is not possible, students may watch online at http://www.uml.edu/FAHSS/Psychology/Research/Departmental-Colloquia.aspx#2016

Make sure to select videos from 2016. To receive credit for attending colloquia or watching colloquia online, students must complete a pink Research I form which is distributed at all colloquia or is available in the psychology office. Please return these pink forms to me, not the psychology department.

3. Homework assignments
Homework exercises are designed to reinforce key concepts from class and provide opportunity for application of skills learned in class. Five brief assignments will require students to answer a series of questions, complete an activity, or take an online tutorial. Although individual assignments are not a substantial portion of a student’s grade, spending time on the assignments will benefit students in class participation and on exams where some of the same questions may appear. Websites for three of the assignments are listed below.

**HW#1** An address by the executive director of APS (American Psychological Society) on why psychological science is important for the good of society http://www.psychologicalscience.org/index.php/psychological-science-is-important

**HW#2** Pseudoscience activity

**HW#3** National institutes of Health training for protecting research participants http://phrp.nihtraining.com/users/login.php

**HW#4** Finding good research articles and writing a summary

**HW#5** Basics of APA style writing: http://flash1r.apa.org/apastyle/basics/index.htm

4. Three in-class exams
Exams are students’ opportunity to demonstrate their mastery of the material covered in class and in the Patten text. Exams will include a combination of objective questions (e.g., multiple choice, matching) and open-ended questions (e.g., short answers,
research design problems). To prepare for exams, students should participate actively in class, keep up with assigned readings, and regularly spend time discussing class material and readings with classmates outside of class. Review materials will be posted to Blackboard before each exam. Only students with documentation of medical or personal emergencies will be allowed to make up exams. Make-ups must occur within one week of the exam date.

5. Research proposal and presentation
The research proposal (25pts.) and presentation (5pts.) incorporate knowledge gained throughout the semester. Research proposals will be based on a topic of interest to the student that could be ethically and feasibly investigated through a research study. Proposed research studies will be minimal-risk, controlled experiments. Psychological research proposals will adhere to APA style, including in-text citations and a Title page, Abstract, Introduction, Method, and References page. Students will be provided with a handout describing each component and providing due dates. No research proposals will be accepted via email!

The proposal should be a masterpiece highlighting students’ critical thinking skills, written communication skills, familiarity with psychological terminology, and overall grasp of the research process.

At the end of the semester, students will give brief (5 min.) oral presentations describing their research proposals. We will share food and celebrate each other’s work.

Grading Policies
Letter grades will be distributed as follows, consistent with University policy:
A = 93pts. and up
A- = 90-92pts.
B+ = 87-89pts.
B = 83-86pts.
B- = 80-82pts.
C+ = 77-79pts.
C = 73-76pts.
C- = 70-72pts.
D+ = 67-69pts.
D = 60-66pts.
F = 59pts. and below

Remember that a grade of C or above is required in Research I to proceed to Research II. The course may be repeated and a higher grade will be substituted but students will only earn credit for taking it one time (i.e., 3 credits) even if they repeat the course. BLA students (Bachelor of Liberal Arts) who have two areas of concentration may elect to pursue Psychology without completing the research sequence. For more on the BLA, consult the undergraduate catalogue: http://www.uml.edu/fahss/bla/

Grades of Incomplete (INC) may only be given under extreme circumstances when most of the work for the course has been completed in a timely fashion but a
**documentable emergency** occurs near the end of the course. The everyday stresses of daily life (work, school, family) are not sufficient to warrant an exception.

**The only opportunities for extra credit will be extra credit questions on exams.** If you are unsatisfied with your performance, please do not ask for other extra credit assignments. The best strategy for success is to budget enough time to give your best effort on each assignment or exam. Avoid starting assignments the night before the due date and cramming for exams. Research has shown that frequent studying and quizzesing spread across time improves retention (Karpicke & Roediger, 2007). Small bits of time can be very useful for reviewing notes or reading. Please talk to me if you want to review concepts that are challenging or strategize for exams.

**Federal and University Regulations**
Regulations stipulate that faculty must provide 3 hours per week (45 hours per semester) of instruction in the classroom or in office hour time per a 3-credit course. Students are expected to complete a minimum of 6 hours per week (90 hours per semester) of work outside of class per a 3-credit course.

**Blackboard site and email**
The course Blackboard site (uml.umassonline.net) allows for easy sharing of handouts and homework assignments. Students will be required to print assignments from Blackboard. PowerPoint slides from class will be posted as a study guide before each exam. I will also frequently communicate with class by sending group email. These emails will automatically be sent to your student.uml.edu account so please check this account regularly. If you regularly use a different email account, please have your student email forwarded to that account.

**Academic integrity**
The University maintains a strict policy against any kind of dishonesty or cheating in student work. Any incidents involving any kind of suspected dishonesty or cheating on exams or written work will be reported to the University judiciary. Students are responsible for familiarizing themselves with the University policy: [http://www.uml.edu/catalog/undergraduate/policies/academic_dishonesty.htm](http://www.uml.edu/catalog/undergraduate/policies/academic_dishonesty.htm).

Learning how to avoid plagiarism in your writing is an extremely important component of this class. Accurate and frequent referencing of others’ work and ideas is the best way to avoid plagiarism in your own writing. When in doubt, include a citation. If you have read the University policy and still have questions about what constitutes plagiarism, please speak with me.

**Academic accommodations, support, and counseling**
Students who have any kind of documented learning disability or would like to be tested should contact the university Office for Disability Services at 978-934-4574 or visit [http://www.uml.edu/student-services/disability/](http://www.uml.edu/student-services/disability/). I will be happy to make any accommodations for students who provide documentation of a disability.
All students may benefit from visiting the Centers for Learning and Academic Support Services on North or South campus at 978-934-2947 or visit http://www.uml.edu/class/. Staff provide assistance with general study skills, time management, and writing.

Being a student can be stressful and overwhelming at times. UML has a wonderful counseling center that provides free and confidential counseling to all UML students. Students are encouraged to take advantage of this service. Set up an appointment by calling 978-934-4331 or visit http://www.uml.edu/student-services/counseling/.

Culture of respect
All student, regardless of race, ethnicity, religion, immigrant status, sexual orientation, gender identity, (dis)ability, or political affiliation, are valued and respected. Diversity is one of the greatest strengths of our UML community. We denounce prejudice and bigotry. We do not tolerate harassment, bullying, or intimidation of our students, whether intended or unintended. We encourage students to speak to their faculty if they are feeling threatened or targeted in any way.

Student complaints
UMass Lowell is committed to the fair treatment of all its students by faculty, staff, and other students. If you feel you have been unfairly treated, your rights are described at http://www.uml.edu/catalog/undergraduate/policies/student_complaints.htm.

Safety
UMass Lowell strives to provide a safe and secure environment for all its students and employees. In any emergency, UMass Lowell police can be reached by dialing x2911 or e-mailing police@uml.edu.

Syllabus use and modification
Please bring your syllabus to every class. This document details what is required to succeed in this class. I will periodically ask students to consult the syllabus as we discuss class assignments. There may be a need for additions or changes to components of this syllabus. I reserve the right to do so after consulting the class about any modifications. Students will receive an addendum with any modifications and the new version of the syllabus will be posted on Blackboard.

Welcome to Research I. I look forward to working together this semester!
### Course schedule
Readings and assignments are due on the date listed.

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<tr>
<th>Date</th>
<th>Topic</th>
<th>Readings &amp; Assignments</th>
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<tbody>
<tr>
<td>Jan. 17</td>
<td>Introduction to the course; Psychology as science</td>
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<td>Jan. 24</td>
<td>Research Ethics</td>
<td>☐ Text Ch. 1-2, 4&lt;br&gt;☐ Read over syllabus&lt;br&gt;☐ <strong>HW#1 APS worksheet</strong></td>
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<tr>
<td>Jan. 31</td>
<td>What is a research question? What are variables? How do we measure them?</td>
<td>☐ Text Ch. 3&lt;br&gt;☐ <strong>HW#2 Pseudoscience</strong></td>
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<td>Feb. 7</td>
<td>Reliability &amp; Validity Approaches to data collection</td>
<td>☐ Text Ch. 15, only <strong><strong>-</strong></strong>&lt;br&gt;☐ <strong>HW#3 NIH tutorial (bring certificate to class)</strong></td>
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<td>Feb. 14</td>
<td><strong>EXAM 1</strong> Library visit</td>
<td>☐ Come prepared with research questions/topics</td>
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<td>Feb. 21</td>
<td>Overall research strategies; Internal &amp; External Validity</td>
<td>☐ Text Ch. 6&lt;br&gt;☐ <strong>HW#4 finding good articles and writing a summary</strong></td>
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<td>Feb. 28</td>
<td>Experimental design; Between- and within-group designs</td>
<td>☐ Text Ch. 7-9</td>
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<td>Mar. 7</td>
<td>APA Style&lt;br&gt;Exam review</td>
<td>☐ Rough draft of Introduction (see Ch. 16 for sample)&lt;br&gt;☐ <strong>HW#5 APA tutorial (print screen showing last page)</strong></td>
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<td>Mar. 14</td>
<td>SPRING BREAK – NO CLASS</td>
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<tr>
<td>Mar. 21</td>
<td><strong>EXAM 2</strong> Building a research sample</td>
<td>☐ Text Ch. 5</td>
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<tr>
<td>Mar. 28</td>
<td>Descriptive design; Correlational design</td>
<td>☐ Text Ch. 12-13&lt;br&gt;☐ <strong>Rough draft of Method</strong></td>
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<tr>
<td>Apr. 4</td>
<td>Factorial designs</td>
<td>☐ Text Ch. 11</td>
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<tr>
<td>Apr. 11</td>
<td>Inferential statistics &amp; hypothesis testing</td>
<td>☐ Text Ch. 15, only <strong><strong>-</strong></strong></td>
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<tr>
<td>Apr. 18</td>
<td>Preview of Research II</td>
<td>☐ Research Proposal</td>
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<td>Apr. 25</td>
<td>Oral presentations&lt;br&gt;Exam review</td>
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<td>May 2</td>
<td><strong>EXAM 3</strong></td>
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